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FACT SHEET

HAZARDOUS AND SOLID WASTE AMENDMENTS PORTION OF THE FINAL RESOURCE CONSERVATION AND RECOVERY ACT DRAFT PERMIT FOR TREATMENT, STORAGE, AND DISPOSAL OF HAZARDOUS WASTE

US Department of Energy, Richland Operations Office
EPA ID No. WA7 89000 8967

AUGUST 29, 1994



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This fact sheet has been developed by the United States Environmental Protection Agency (EPA) Region 10. Its purpose is to discuss the Hazardous and Solid Waste Amendments (HSWA) portion of the Resource Conservation and Recovery Act (RCRA) final permit for Treatment, Storage, and Disposal of Hazardous Waste at the United States Department of Energy Richland Operations Office, which is commonly referred to as the Hanford Federal Facility. The HSWA portion of the final permit addresses requirements which are applicable to the Hanford facility, but have not yet been delegated to the State of Washington Department of Ecology (Ecology) by EPA. The primary concern of the HSWA portion of the final permit is corrective action.

Purpose of the Permitting Process

The purpose of the permitting process is to impose on a site-specific basis the requirements necessary for a facility to comply with the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. §§ 6901 et seq., and the regulations promulgated thereunder in Title 40 of the Code of Federal Regulations (40 CFR), and the applicable provisions of the Revised Code of Washington (RCW) Chapter 70.105 and the regulations promulgated thereunder in the Washington Administrative Code (WAC) Chapter 173-303.

Procedures for Reaching a Final Decision

EPA and Ecology were required to prepare a proposed notice of their intent to issue the final RCRA permit. The public was given an opportunity to review and comment on this proposed notice prior to the EPA and Ecology taking final action on the permit.

Section 7004(b) of RCRA, 42 U.S.C. § 6974(b), and 40 CFR § 124.10 require that the public be given a minimum of forty-five (45) days to comment on each proposed permit determination. EPA and Ecology extended this public comment period to a sixty (60) day comment period which began on February 9, 1994 and ended on April

11, 1994. Based on public comment, EPA and Ecology then extended this public comment period by an additional thirty (30) days from April 11, 1994 to May 11, 1994.

EPA and Ecology conducted three public meetings and hearings on March 29, 30 and 31, 1994. The public meetings included a presentation describing the contents of the RCRA permit and a question and answer session. The meetings were followed by hearings. The meetings and hearings were held as follows:

March 29, 1994
Columbia Basin College
Room L102, Library Building
2600 North 20th Street
Pasco, Washington

March 30, 1994
Clark County PUD
Electric Center Office
1200 Fort Vancouver Way
Vancouver, Washington

March 31, 1994
Seattle Center
Center House
Conference Room G
Seattle, Washington

EPA has considered all written comments received during the public comment period, and comments received during the public hearings, including documents listed in the EPA response to comments in accordance with 40 CFR § 124.17(b), in making this determination as defined in 40 CFR § 124.18 to issue a final RCRA permit on August 29, 1994.

In making this final decision regarding permit issuance, EPA has given notice to the applicant and each person who has submitted written comments or requested notice of the final decision. The final decision shall become effective no sooner than thirty (30) days after the notice of final determination, on September 28, 1994, unless a review is requested pursuant to 40 CFR § 124.19 for the EPA portion of the permit.

Overview

Under RCRA, as amended by HSWA, corrective action is required for all solid waste management units (SWMUs) which have the potential for release or have released hazardous waste or hazardous constituents, regardless of the date waste was placed in such units, as necessary to protect human health and the environment. Corrective action for the Hanford Facility will generally be

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satisfied as specified by the Federal Facility Agreement and Consent Order, as amended (commonly known as the "FFACO" or the Tri-Party Agreement), up to the point of remedy selection. The selected remedy and implementation schedule will be incorporated into the HSWA portion of the final RCRA permit through permit modification according to terms contained in the FFACO Action Plan. Corrective action is addressed in Part III of the HSWA Permit, as this portion of the RCRA program is not yet delegated to the state of Washington.

One of the primary purposes of the HSWA portion of the final RCRA permit is to require investigation and, if necessary, remediation of any releases or potential releases of hazardous waste or hazardous constituents from solid waste management units (SWMUs) at the Hanford Facility, in areas which are not included within the jurisdictional scope of the FFACO. The only area addressed in this manner is the area leased by US Ecology where US Ecology operates a Low Level Radioactive Waste Disposal Facility. The SWMUs at US Ecology are further described in the July 20, 1992, US Ecology Site RCRA Facility Assessment conducted by the EPA.

The permit also serves as the enforceable mechanism into which final remedies and schedules of compliance will be incorporated for RCRA Past Practice Units whose initial characterization was completed under the FFACO. The HSWA portion of the draft RCRA permit also provides procedures for reporting new SWMUs.

Other HSWA permit conditions require the Department of Energy to comply with all land disposal restrictions ("LDRs") applicable to this facility. The permit allows the Department of Energy to manage wastes exhibiting the Toxicity Characteristic (TC) to be managed in container storage areas identified in the Dangerous Waste portion of the RCRA permit, and to conduct closure activities at regulated units that previously managed TC wastes. EPA believes that these additional waste codes provided for in the HSWA permit will not require substantially different management than other waste codes for which the Department of Ecology is currently authorized. For this reason, Parts IV and V of the HSWA permit references management standards appearing in Parts III and V of the Dangerous Waste permit, respectively.

The HSWA portion of the RCRA permit also requires annual certification that on-site generation of hazardous waste is minimized to the extent practicable. The LDR and waste minimization requirements are addressed in final HSWA Permit Conditions II.F and II.G. The remainder of the HSWA portion of the final permit consists of standard conditions and enabling language. Corrective action requirements are tailored to site specific conditions.

Facility Description

The HSWA portion of the final RCRA permit applies to the Hanford Facility, which is defined as a single RCRA facility and is identified by the EPA/Ecology Identification number WA7 89000 8967. The Hanford Facility consists of 560 square miles in Southeastern Washington State, including lands which are owned by the Department of Energy, but leased to other parties.

The Hanford Facility is divided into numerically designated areas. The reactors are located along the Columbia River in the "100 Area." The reactor fuel reprocessing units are in the "200 Area," which are on a plateau approximately 7 miles from the Columbia River. The "300 Area," located adjacent to and north of Richland, contains the reactor fuel manufacturing plants and the research and development laboratories. The "400 Area," 5 miles northwest of the 300 Area, contains the Fast Flux Test Facility designed for testing liquid metal reactor systems. The 600 Area covers all locations not specifically given an area designation.

There are currently over 1,300 waste management units that have been identified within the Hanford Facility, the majority of which are identified as solid waste management units (SWMUs) under RCRA. These SWMUs have been assigned to operable units under the FFACO, Appendix C, as amended, for investigation and potential remediation. Newly identified SWMUs subject to corrective action under the FFACO will be assigned to the appropriate operable unit under the FFACO change control process.

Either RCRA Corrective Action authority or the CERCLA Remedial Action authority has been designated as the prime authority over investigation and remediation for each operable unit. Remedy selections for RCRA corrective actions will be incorporated into the HSWA Portion of the RCRA permit as permit modifications following unit characterization under the FFACO. Interim measures, if any, for SWMUs addressed by the FFACO, will be addressed according to the FFACO.

In addition to SWMUs assigned to operable units under the FFACO, there are SWMUs on land which is leased to other parties which are not addressed by the FFACO. Corrective action required for each of these units, including schedules of compliance for these SWMUs are addressed under the HSWA portion of this RCRA permit. Currently, only the US Ecology SWMUs are addressed in this fashion. However, other newly-discovered SWMUs on land leased to other parties will be incorporated into the HSWA permit according to HSWA Permit Condition III.F.

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Authority for RCRA Corrective Action Permitting

On November 4, 1984, the President signed into law the Hazardous and Solid Waste Amendments of 1984 (HSWA), which amended the Resource Conservation and Recovery Act (RCRA). HSWA requires EPA to include corrective action in all permits issued after November 4, 1984, as necessary to protect human health and the environment. Ecology also has authority to issue corrective action requirements pursuant to Chapter 70.105 of the Revised Code of Washington (RCW). Ecology has corrective action permitting requirements in its own regulations, but the State has not yet been delegated authority by EPA to implement the HSWA corrective action program in lieu of the federal program in the state of Washington.

Key provisions of the law are codified at 40 CFR § 264.101 and the Chapters 173-303-645(12) and 173-303-806(4) of Washington Administrative Code (WAC). Ecology will incorporate HSWA permit conditions into the state-issued RCRA permit through a department-initiated Class 3 permit modification following authorization by EPA for HSWA corrective action. Requirements and authorities established pursuant to HSWA in the RCRA permit will be administered and enforced by EPA until Ecology receives authorization to administer and enforce such authorities and requirements, and modifies the Hanford permit.

All corrective action provisions of the final HSWA permit being issued to the Department of Energy are based on authority in Section 3004(u) of RCRA, and regulations appearing in 40 CFR §§ 264.101(a) and (b). The FFACO and the HSWA permit, however, each set forth a regulatory pathway through which final remedial measures for "RCRA Past Practice Units" (RPPs) will be incorporated into the HSWA permit through the permit modification process. RPPs, in turn, are defined to include all SWMUs and non-SWMUs, such as one-time spills. Since corrective action for non-SWMUs is beyond the scope of Sections 3004(u) or 3004(v) of RCRA (Section 3004(v) mandates corrective action for releases from SWMUs that extend beyond the facility boundary), EPA (or Ecology, after authorization and permit modification) intend to address corrective action for non-SWMU RPPs through the authority of Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), and 40 CFR § 270.32(b)(2). This "omnibus" authority will be cited at the time the HSWA permit is modified to incorporate such units.

Issues Raised by the Hazardous and Solid Waste Amendments (HSWA) Permit Requirements

During the course of final permit development for corrective action at Hanford, a number of legal and policy questions were raised and eventually resolved to support the proposed conditions. The discussion under the enumerated headings below

addresses key issues which have been examined since issuance of the first draft permit. Additional discussion of these issues may be found in the August 29, 1994, Response to Comments for the final HSWA permit, as well as the February 9, 1994, Response to Comments which accompanied the previous draft HSWA Permit.

1. Relationship between the FFACO and the permit requirements for corrective action.

The corrective action requirements for the Hanford Facility will be satisfied by requirements specified in the FFACO for SWMUs on lands owned by the Department of Energy (the Permittee) and not leased to other parties. Part III of the HSWA Permit also contains language which describes the manner in which the requirements of the FFACO and the HSWA Permit will be coordinated for the RCRA Past Practice Units which are addressed by the FFACO.

However, there are additional SWMUs at the Hanford facility which have been determined to warrant investigation and, potentially, remediation for release of hazardous constituents. These SWMUs were not included in the jurisdiction of the FFACO because they were located on lands leased by the Department of Energy to other parties. The jurisdiction of the RCRA corrective action authority encompasses all contiguous lands under the control of the party seeking the permit. Therefore, although the Department of Energy is not the operator of activities on these leased lands, the Department is responsible under RCRA as the Hanford Federal Facility owner for appropriately responding to releases of hazardous constituents on these leased lands. Part III of the HSWA portion of the final RCRA permit consists of conditions which are imposed upon the Department of Energy to address corrective action needs on those leased lands.

2. Differences between the February 1994 draft and the August 1994 final permit corrective action requirements.

In response to comments on the February 1994 draft permit, EPA has removed all SWMUs which are within the jurisdiction of the FFACO from the revised August 1994 final permit. Specifically, the Midway Substation and Community, North Slope, 351 Substation, Central Waste Landfill, and the Hanford Site Waste Units were deleted in the revised final permit. While these areas are within the Hanford Federal Facility subject to HSWA corrective action, such actions are already addressed through designation of these areas as RCRA Past Practice areas under the FFACO. Only the SWMUs on land leased to US Ecology are specifically addressed in the HSWA Permit. The SWMUs identified as needing further investigation at the US Ecology site are the disposal units known as the Chemical Trench, the Low Level Radioactive Waste Trenches 1 through 11A, and the Underground Resin Tank Area.

US Ecology has had operational control over the SWMUs of concern, and US Ecology is subject to requirements under a license granted by the Nuclear Regulatory Commission (NRC). To reflect this fact, EPA added language to the final HSWA permit which would allow for deferred oversight of investigation and potential remediation at US Ecology under state authorities which could be directly imposed upon US Ecology. Other potential state mechanisms are identified in final HSWA Permit Condition III.B.2.

The requirements for corrective action management units (CAMUs) and temporary units, which were promulgated by EPA on February 16, 1993 (58 Fed. Reg. 8658), have also been included in the revised final permit under HSWA Permit Condition III.I. EPA has also included attachments A through F in the August 1994 final HSWA permit. These attachments address the RFI workplan requirements, sampling and analysis and data management program requirements, scope of work for corrective measures study, scope of work for corrective measures implementation, interim measures requirements, and the Hanford Federal Facility Site Legal Description.

3. Basis for corrective action requirements at the U.S. Ecology, site.

On July 20, 1992, EPA completed a RCRA Facility Assessment (RFA) Final Report on the US Ecology portion of the Hanford Federal Facility. The RFA is the first step in the processes for implementing the corrective action provisions of HSWA. The RFA was performed to evaluate US Ecology's past and present solid waste management practices. If these practices pose a potential threat to human health or the environment, corrective action is required. The RFA identified several SWMUs which require further investigation. These SWMUs include the Chemical Trench, and the Low-Level Radioactive Waste Trenches 1 through 11A, and the Underground Resin Tank Area.

The draft permit conditions, for the SWMUs which require further investigation, are based upon the authorities contained in Section 3004(u) of RCRA, 42 U.S.C. § 6924(u), and regulations codified at 40 CFR § 264.101.

Several other SWMUS were identified in the RFA. However, EPA has determined that a release of hazardous waste or hazardous constituents from these SWMUS has not occurred, and thus corrective action is not warranted.

4. Jurisdictional relationship between the NRC License requirements and the HSWA corrective action requirements for U.S. Ecology.

US Ecology operates a low-level radioactive waste disposal site under a license granted by the Nuclear Regulatory Commission

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(NRC) and overseen by the State of Washington Department of Health. US Ecology has conducted disposal practices in the past which would today be considered disposal of "mixed" waste. Mixed waste is defined by EPA as waste containing a hazardous component subject to RCRA and radioactive component subject to the Atomic Energy Act. In July 1986, EPA clarified that the hazardous waste component of mixed waste was regulated under RCRA. US Ecology ceased disposal of mixed waste prior to that date and thereby avoided regulation as a RCRA disposal facility. However, the old (pre-1986) disposal units at US Ecology remain subject to RCRA's corrective action authorities because they are located on property owned by the Department of Energy and are considered part of the Hanford Federal Facility.

Although solid waste management units at the US Ecology portion of the Hanford facility are subject to RCRA corrective action requirements, such requirements would not be imposed if they conflict with, or are redundant to, requirements of the NRC license, which is administered under the authority of the Atomic Energy Act (AEA) through the state of Washington Department of Health. See Section 1006 of RCRA, 42 U.S.C. § 6905. EPA does not believe that the proposed HSWA permit conditions duplicate or conflict with AEA requirements. In reaching this determination, EPA reviewed NRC license requirements, as well as submittals prepared by US Ecology under the terms of its license.

US Ecology's Radioactive Materials License includes specific environmental monitoring and survey conditions for low-level radioactive waste disposal. The license includes the requirement that US Ecology sample five groundwater monitoring wells on site. Samples from these wells must be analyzed quarterly for radioactivity and physical and chemical parameters. These analyses are limited to temperature, specific conductivity, total organic carbon, and nitrates. The parameters measured are not sufficient to demonstrate whether a release has occurred or whether further corrective action is required.

Language has been included in the final permit which would allow US Ecology to work with the Department of Health and the Department of Ecology to address substantive corrective action requirements under either the NRC license or a state-issued order. US Ecology believes that corrective action under one of these alternative mechanisms would be more advantageous and cost effective by eliminating regulatory duplication. HSWA corrective action permit requirements applicable to the Department of Energy as owner of the Hanford Federal Facility may be deferred to the extent these requirements are addressed through cooperation with the Department of Health and/or Department of Ecology.

Availability of Documents for Public Review

The administrative record which supports issuance of the HSWA Permit, including all data submitted by the applicant, the fact sheet, the final permit and maps showing the exact location of the activity, may be reviewed between the hours of 8:30 am and 4:30 pm, Monday through Friday at the following locations:

U.S. EPA Region 10
Waste Management Branch
10th Floor - Park Place Building
1200 Sixth Avenue
Seattle, Washington 98101

Washington State Department of Ecology
Nuclear and Mixed Waste Management Program
300 Desmond Drive
Lacey, Washington 98503-1138

Westinghouse Hanford Company
740 Stevens Center, Suite 1101
Richland, Washington 99351

Any person desiring further information, copies or portions of the administrative record, or an appointment to review the record should contact either Ms. Diane Richardson, EPA, Hazardous Waste Division, at the above address or call (206) 553-1847, Ms. Marilyn Smith, Washington State Department of Ecology at the above address, or call (206) 407-7097, or Ms. Connie Wilson, Westinghouse Hanford Company at the above address, or call (509) 376-7163.

In addition, copies of the final HSWA portion of the RCRA permit fact sheet, an index of the HSWA permit administrative record, and the final HSWA portion of the RCRA permit are available for public review at the following public information repositories:

University of Washington - Suzzallo Library
Mailstop FM-25 - Government Publications
Seattle, Washington 98195
(206) 543-4664
Attention: Eleanor Chase

U.S. Department of Energy Reading Room
Washington State University Library, Tri-Cities
100 Sprout Road, Room 130
Richland, Washington 99352
(509) 376-8583
Attention: Terri Traub

Portland State University Library
Branford Price Millar Library
Science and Engineering Floor
Corner of SW Harrison and Park
Portland, Oregon 97207
(503) 725-3690
Attention: Michael Bowman

Gonzaga University
Foley Center
E. 502 Boone
Spokane, Washington 99258
(509) 328-4220, ext. 3125
Attention: Lewis Miller

Permit Organization

The permit is divided into three sections and six (6) Attachments, as described below:

<u>Section</u>	<u>Topic</u>
Part I	Standard Conditions
Part II	General Facility Conditions
Part III	Corrective Action
Part IV	Container Storage
Part V	Unit-Specific Conditions For Units Undergoing Closure
<u>Attachment</u>	<u>Topic</u>
Attachment A	<u>RCRA Facility Investigation Work Plan Requirements</u>
Attachment B	<u>Sampling and Analysis and Data Management Program Requirements</u>
Attachment C	<u>Scope of Work for Corrective Measure Study</u>
Attachment D	<u>Scope of Work for Corrective Measure Implementation</u>
Attachment E	<u>Interim Measures Requirements</u>
Attachment F	<u>Facility Legal Description</u>

Parts I and II contain conditions which generally apply to all hazardous waste facilities. Part III pertains specifically to the hazardous waste corrective action activities at the Hanford Facility. Part IV contains a condition which authorizes the Permittee to store toxicity characteristic (waste codes D018-D043) hazardous waste in containers as specified in Part III of the state's Dangerous Waste Permit. Part V contains a condition which authorizes the Permittee to conduct closure activities at units previously managing wastes exhibiting the toxicity characteristic (waste codes D018-D043) and now undergoing closure as specified in Part V of the Dangerous Waste Permit.

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